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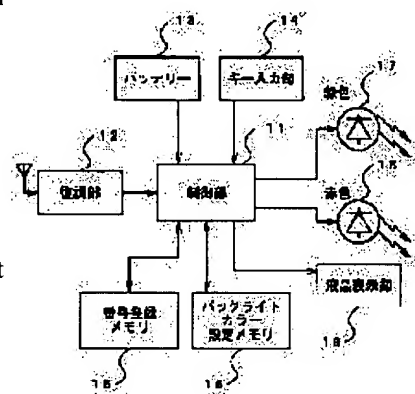
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(54) PORTABLE TERMINAL EQUIPMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To improve convenience by easily discriminating the operating state of portable terminal equipment by providing light emitting elements in plural colors as backlights for a liquid crystal display part and changing display colors on the liquid crystal display part while changing the colors of light emitting elements corresponding to prescribed states.

SOLUTION: A battery 13 supplies power to respective parts and outputs a signal expressing the quantity of stored electricity to a control part 11. While receiving the input of signal expressing the quantity of stored electricity from the battery, corresponding to that quantity of stored electricity, the control part 11 turns on or turns off a green LED 17 or a red LED 18 arranged at the upper part of a liquid crystal display part 19 according to the patterns of light emission stored in a backlight color setting memory 16. Namely, when sufficient electricity is stored in the battery, the green LED 17 is turned on and the red LED 18 is turned off. When electricity stored in the battery is lacked, the green LED 17 is turned off and the red LED 18 is turned on. Further, the control part 11 displays the operating state or the like on the liquid crystal display part 19 as well.



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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention is notified by the approach of starting personal digital assistant equipments, such as a portable telephone, especially being easy to recognize operating state, such as lack of the amount of dc-battery accumulation of electricity, and relates to the personal digital assistant equipment which can grasp the operating state easily.

[0002]

[Description of the Prior Art] Conventional personal digital assistant equipment is explained. How to display an alphabetic character message with the insufficient amount of dc-battery accumulation of electricity on a display as a function which notifies operating state, such as lack of the amount of dc-battery accumulation of electricity, or display an icon etc. on conventional personal digital assistant equipment is considered. Here, as for a display, it is common that it is very small LCD in consideration of the portability of personal digital assistant equipment.

[0003] Moreover, with the conventional portable telephone, in order to tell who a partner is using a partner's telephone number which carried out call origination being transmitted in the case of a call in before off-hook, it considers displaying a partner's telephone number on the above-mentioned display.

[0004]

[Problem(s) to be Solved by the Invention] However, with the above-mentioned conventional personal digital assistant equipment, since an alphabetic character message, an icon, etc. were displayed on the above, very small displays, visibility, such as an alphabetic character message and an icon, was bad, it was difficult to be unable to grasp the operating state of personal digital assistant equipment easily, and to read the telephone number, and there was a trouble that convenience was low.

[0005] In view of the above-mentioned actual condition, it succeeded in this invention, it can grasp operating state easily, and aims at offering the high personal digital assistant equipment of convenience.

[0006]

[Means for Solving the Problem] Invention according to claim 1 for solving the trouble of the above-mentioned conventional example Are personal digital assistant equipment possessing the liquid crystal display section, and it has the light emitting device of two or more colors as a back light of said liquid crystal display section. It is characterized by changing the color of said light emitting device and changing the foreground color of said liquid crystal display section according to the condition of having been set up beforehand, it is done, the condition of personal digital assistant equipment can be distinguished by the color of the liquid crystal display section, and operating state can be distinguished easily.

[0007] Invention according to claim 2 for solving the trouble of the above-mentioned conventional example A dc-battery, a control section, the liquid crystal display section, the 1st light emitting device, and the 2nd light emitting device, It is personal digital assistant equipment with which it has back light color setting memory, and said the 1st light emitting device and said 2nd light emitting device operate as a back light of said liquid crystal display section. Said back light color setting memory is back light color setting memory which stores a setup with the 1st pattern which makes said 1st light emitting device turn on, and the 2nd pattern which makes said 2nd light emitting device turn on. If said control section detects the amount of accumulation of electricity of said dc-battery and its amount of accumulation of electricity concerned is lower than the amount of accumulation of electricity set up beforehand If said 2nd light emitting device is turned on according to the 2nd pattern set as said back light color setting memory and the amount of accumulation of electricity is not lower than the amount of accumulation of electricity set up beforehand It is characterized by being the control section which turns on said 1st light emitting device according to the 1st pattern set as said back light color setting memory, and can distinguish whether the amount of accumulation of electricity of a dc-battery is enough by the foreground color of the liquid crystal display section, and operating state can be distinguished easily.

[0008] Invention according to claim 3 for solving the trouble of the above-mentioned conventional example The recovery section which restores to the signal which arrives at an antenna, and the number registration memory which registers and stores two or more telephone numbers, It has a control section, the liquid crystal display section, the 1st light emitting device and the 2nd light emitting device, and back light color setting memory. Said the 1st light emitting device and said 2nd light emitting device are personal digital assistant equipment which operates as a back light of said liquid crystal display section. Said back light color setting memory It is the back light color setting memory which stores a setup with the 1st pattern which makes said 1st light emitting device turn on, and the 2nd pattern which makes said 2nd light emitting device turn on. Said

control section In response to the input of the signal showing having carried out the call in from said recovery section, a partner's telephone number which carried out call origination from the signal concerned is detected. According to the 1st pattern which searched this telephone number from said number registration memory, and was set as said back light color setting memory when searched, turn on said 1st light emitting device, and if not searched When it is characterized by being the control section which turns on said 2nd light emitting device according to the 2nd pattern set as said back light color setting memory and a call in is carried out, the aim of what kind of person the partner who did call origination is can be given, and convenience can be raised.

[0009] Invention according to claim 4 for solving the trouble of the above-mentioned conventional example The recovery section which restores to the signal which arrives at an antenna, and the number registration memory which registers and stores two or more telephone numbers, It has a dc-battery, a control section, the liquid crystal display section, and the 1st light emitting device and 2nd light emitting device. Said the 1st light emitting device and said 2nd light emitting device are personal digital assistant equipment which operates as a back light of said liquid crystal display section. Said back light color setting memory It is the back light color setting memory which stores a setup with the 1st pattern which makes said 1st light emitting device turn on, and the 2nd pattern which makes said 2nd light emitting device turn on. Said control section Usually, if the amount of accumulation of electricity of said dc-battery is detected and the amount of accumulation of electricity concerned is lower than the amount of accumulation of electricity set up beforehand If said 2nd light emitting device is turned on according to the 2nd pattern set as said back light color setting memory and the amount of accumulation of electricity is not lower than the amount of accumulation of electricity set up beforehand If the input of the signal showing having turned on said 1st light emitting device according to the 1st pattern set as said back light color setting memory, and having carried out the call in from said recovery section is received Detect a partner's telephone number which carried out call origination from the signal concerned, search this telephone number from said number registration memory, and if searched According to the 1st pattern set as said back light color setting memory, turn on said 1st light emitting device, and if not searched It is characterized by being the control section which turns on said 2nd light emitting device according to the 2nd pattern set as said back light color setting memory, and distinguishes whether the amount of accumulation of electricity of a dc-battery is enough by the foreground color of the liquid crystal display section. When operating state can be distinguished easily and carries out a call in, the aim of what kind of person the partner who did call origination is can be given, and convenience can be raised.

[0010] Invention according to claim 5 for solving the trouble of the above-mentioned conventional example In personal digital assistant equipment according to claim 2, 3, or 4 a control section It is characterized by being the control section rewritten according to the directions into which the 1st pattern set as said back light color setting memory and the 2nd pattern were inputted. Freely, a user can rewrite the pattern of luminescence of a light emitting device so that highly [visibility], he can distinguish operating state more easily, and can raise convenience.

[0011]

[Embodiment of the Invention] The case where the personal digital assistant equipment applied to this invention especially in the gestalt of operation of this invention is a portable telephone is taken for an example, and it explains, referring to a drawing. With the sufficient amount of accumulation of electricity of a dc-battery, by whether lack is carried out, the 1st personal digital assistant equipment (the 1st equipment) concerning this invention changes the color of the back light of the liquid crystal display section, and can grasp [or or] operating state easily.

[0012] The 1st equipment is explained using drawing 1. Drawing 1 is the configuration block Fig. of the personal digital assistant equipment concerning this invention. The 1st equipment consists of fundamentally a control section 11, the recovery section 12, a dc-battery 13, the key input section 14, the registration number memory 15, back light color setting memory 16, green LED17, and red LED 18 and the liquid crystal display section 19, as shown in drawing 1.

[0013] In addition, although LED is used as an example of a light emitting device, if the liquid crystal display section can be illuminated even if it is not LED, no matter it may be what thing, it will not matter here. The 1st equipment is omitting them here, although it is the whole configuration that there is a part for achieving the function as a portable telephone in addition to this.

[0014] Hereafter, each part is explained concretely. A control section 11 carries out a singing output through a receiver in response to the input of the signal of a message from the recovery section 12, in order to achieve the function as a portable telephone, for example, while detecting a call in etc. in response to the input of the signal received from the recovery section 12.

[0015] Moreover, according to the pattern of luminescence stored in the back light color setting memory 16 later explained according to the amount of accumulation of electricity in response to the input of the signal showing the amount of accumulation of electricity from a dc-battery 13, a control section 11 turns on green LED17 or red LED 18, and puts out the light youthfully so that it may explain later. Furthermore, a control section 11 carries out the display output of the operating state etc. also to the liquid crystal display section 19.

[0016] Furthermore, a control section 11 carries out call origination of the telephone number concerned according to the directions from a user which search the telephone number stored in the number registration memory 15, for example, are inputted from the key input section 14.

[0017] The recovery section 12 restores to the signal which arrived at the antenna, and outputs it to a control section 11. If the call in of the recovery section 12 is carried out, specifically, it will output the signal of a call in to a control section 11.

[0018] A dc-battery 13 outputs the signal with which the amount of accumulation of electricity is expressed to a control

section 11 to a control section 11 while supplying a power source to each part. The key input section 14 is outputted to a control section 11 in response to the input of directions from a user.

[0019] The number registration memory 15 stores the telephone number etc. As shown in drawing 2 (a), the back light color setting memory 16 matched a condition of operation and LED which should light up or put out the light, and has set it up as a pattern of lighting. The place which stores concretely a setup of the pattern which turns on green LED17 as the 1st pattern, and a setup of the pattern which turns on red LED 18 as the 2nd pattern is expressed with drawing 2. Drawing 2 is an explanatory view showing an example of the contents of the back light color setting memory 16.

[0020] In addition, the back light color setting memory 16 can consider that a user can rewrite now. In this case, a control section 11 should just rewrite the contents of the back light color setting memory 16 according to the directions inputted from the key input section 14. If it does in this way, freely, a user rewrites the pattern of luminescence of a light emitting device so that highly [visibility], operating state is distinguished more easily, and there is effectiveness which can raise convenience.

[0021] Although green LED17 and red LED 18 are the usual LED and it is with green and red here, it may be included as long as there are other colors, for example, blue LED. And as it is indicated in drawing 3 as green LED17 and red LED 18, it is arranged in the upper part of the liquid crystal display section 19. Drawing 3 is an explanatory view showing an example of arrangement of LED.

[0022] here -- LED of a control section 11 -- lighting -- the actuation made to switch off youthfully is explained using drawing 4. Drawing 4 is a flow chart Fig. explaining actuation of the control section 11 in the 1st equipment.

[0023] In addition, in the following explanation, when green LED17 lights up at a certain time by the amount of accumulation of electricity of a dc-battery coming out enough, red LED 18 puts out the light and the amounts of dc-battery accumulation of electricity are insufficient, although green LED17 is switched off and red LED 18 lights up, you may set how by setup.

[0024] First, it judges whether it is lower than the threshold to which it is set beforehand (S1), and if lower than a threshold, red LED 18 will be made to turn on and green LED17 will be made to detect the electrical potential difference of a dc-battery 13, and to switch off with reference to the back light color setting memory 16 with the signal into which a control section 11 is inputted from a dc-battery 13, (if it to be Yes) (S2). And a control section 11 carries out processing termination.

[0025] Moreover, if the electrical potential difference of a dc-battery 13 is higher than a threshold, green LED17 will be made to turn on and red LED 18 will be made to switch off with reference to the back light color setting memory 16 in processing S1 (if it to become No) (S3). And a control section 11 carries out processing termination.

[0026] Next, actuation of the 1st equipment is explained. The signal with which a dc-battery 13 expresses the amount of accumulation of electricity is outputted to a control section 11. Then, it judges whether a control section 11 is lower than the threshold to which the electrical potential difference of a dc-battery 13 is detected, and it is beforehand set by the signal concerned.

[0027] And when judged with it being higher than a threshold, a control section 11 makes green LED17 turn on. And since the liquid crystal display section 19 is illuminated by green LED17, the amount of accumulation of electricity of a dc-battery will come out enough, and a user will know a certain thing.

[0028] Since the liquid crystal display section 19 is illuminated by red LED when according to the 1st equipment the amount of accumulation of electricity of a dc-battery 13 comes out enough, the liquid crystal display section 19 is illuminated by green LED17 at a certain time and it runs short, it is effective in the ability to know the condition of actuation of equipment easily.

[0029] Next, the personal digital assistant equipment (the 2nd equipment) concerning the gestalt of operation of the 2nd of this invention is explained. By whether the telephone number which a control section 11 is not by the amount of accumulation of electricity of a dc-battery 13, and carried out the call in is a number registered into the number registration memory 15, the 2nd equipment can change the color of LED made to turn on, and can raise convenience.

[0030] Although the 2nd equipment is equipped with the same configuration as the 1st equipment shown in drawing 1, specifically, actuation of a control section 11 differs a little. When actuation of a control section 11 is explained concretely, then, a control section 11 In response to the input of the signal received from the recovery section 12, by whether a calling party's telephone number contained in the signal concerned as it is the signal of a call in is searched from the number registration memory 15, and it is searched so that it may explain later a setup stored in the back light color setting memory 16 -- following -- green LED17 and red LED 18 -- lighting -- the light is put out youthfully.

[0031] Moreover, a control section 11 carries out the singing output of the signal inputted from the recovery section 12 through a receiver, in order to achieve the function as a portable telephone. Moreover, a control section 11 carries out the display output of the operating state etc. also to the liquid crystal display section 19 according to the amount of accumulation of electricity in response to the input of the signal showing the amount of accumulation of electricity from a dc-battery 13.

[0032] Furthermore, a control section 11 carries out call origination of the telephone number concerned according to the directions from a user which search the telephone number stored in the number registration memory 15, for example, are inputted from the key input section 14.

[0033] In addition, as shown in drawing 2 (b), suppose the back light color setting memory 16 that a setup of whether to make which of green LED17 and red LED 18 switch on the light is stored by whether a partner's telephone number which carried out call origination is stored in the number registration memory 15. Concretely, a setup of the pattern which makes green LED17 turn on as the 1st pattern, and a setup of the pattern which makes red LED 18 turn on as the 2nd pattern are expressed here.

[0034] here -- lighting of LED of the control section 11 of the 2nd equipment -- the actuation which controls putting out lights

youthfully is explained using drawing 5. Drawing 5 is a flow chart Fig. showing actuation of the control section 11 of the 2nd equipment. The control section 11 of the 2nd equipment searches a calling party's telephone number contained in the signal concerned as the signal inputted from the recovery section 12 is a signal of a call in from the number registration memory 15, and judges whether it is searched or not (S11).

[0035] And if a calling party's telephone number is searched (it is Yes), according to a setup stored in the back light color setting memory 16, green LED17 will be turned on, and it will suppose that red LED 18 has been switched off (S12), and will shift to processing S14. Moreover, in processing S11, if a calling party's telephone number is not searched (it is No), according to a setup stored in the back light color setting memory 16, red LED 18 will be turned on and suppose that green LED17 has been switched off (S13).

[0036] And the control section 11 of the 2nd equipment judges whether it is the no by which off-hook was carried out (S14), and if off-hook is not carried out (it is No), it will repeat and perform processing S14. Moreover, in processing S14, if off-hook is carried out (it is Yes), while connecting a circuit and starting a message, green LED17 and red LED 18 are switched off (S15), and processing termination is carried out.

[0037] Next, actuation of the 2nd equipment is explained. If the recovery section 12 carries out a call in, the signal showing having carried out the call in will be outputted to a control section 11. And a control section 11 searches a partner's telephone number which is contained in the signal concerned and which carried out call origination from the number registration memory 15.

[0038] And when a partner's telephone number which carried out call origination to the number registration memory 15 is searched, a control section 11 makes green LED17 turn on. And a user comes to get to know having carried out the call in from the partner registered into the number registration memory 15.

[0039] If a calling party's telephone number is stored in the number registration memory 15 according to the 2nd equipment If the liquid crystal display section 19 is illuminated by green LED17 and a calling party's telephone number is not stored in the number registration memory 15, since the liquid crystal display section 19 will be illuminated by red LED 18 It acts as a user, and by the foreground color of the liquid crystal display section 19, aim attachment ***** can do what kind of person a calling party is, and there is effectiveness which can raise convenience.

[0040] Next, the personal digital assistant equipment (the 3rd equipment) concerning the gestalt of operation of the 3rd of this invention is explained. The 3rd equipment can have the function of the function of the 1st equipment, and the 2nd equipment, and can grasp the operating state of equipment easily, and can raise convenience.

[0041] Although the 3rd equipment is equipped with the same configuration as the 1st equipment shown in drawing 1 like the 2nd equipment, actuation of a control section 11 differs a little.

[0042] Then, hereafter, if actuation of the control section 11 of the 3rd equipment is explained concretely, the control section 11 of the 3rd equipment will carry out a singing output through a receiver in response to the input of the signal of a message from the recovery section 12, in order to achieve the function as a portable telephone, for example, while detecting a call in etc. in response to the input of the signal received from the recovery section 12.

[0043] moreover, a setup stored in the back light color setting memory 16 by whether a control section 11 searches a calling party's telephone number contained in the signal concerned after receiving the input of the signal of a call in from the recovery section 12 until it carries out off-hook, as already explained using drawing 5 from the number registration memory 15, and it is searched -- following -- green LED17 and red LED 18 -- lighting -- the light is put out youthfully.

[0044] Furthermore, after a control section 11 carries out off-hook until it receives the signal of a call in from the recovery section 12, as already explained using drawing 4, according to the directions stored in the back light color setting memory 16 later explained according to the amount of accumulation of electricity in response to the input of the signal showing the amount of accumulation of electricity from a dc-battery 13, it turns on green LED17 or red LED 18, and puts out the light youthfully. Furthermore, a control section 11 carries out the display output of the operating state etc. also to the liquid crystal display section 19.

[0045] Furthermore, a control section 11 carries out call origination of the telephone number concerned according to the directions from a user which search the telephone number stored in the number registration memory 15, for example, are inputted from the key input section 14.

[0046] Moreover, both a setup shown in drawing 2 (a) and a setup shown in drawing 2 (b) are stored in the back light color setting memory 16.

[0047] Here, actuation of the control section 11 of the 3rd equipment is more concretely explained using drawing 6. Drawing 6 is a flow chart Fig. showing actuation of the control section 11 of the 3rd equipment. the amount of dc-battery accumulation of electricity which shows the control section 11 of the 3rd equipment first to drawing 4 -- lighting with green LED17 and red LED 18 -- termination of the processing judges whether it connects with the circuit from performing processing which puts out the light youthfully (S22). (S21)

[0048] And if it connects with the circuit (it is Yes), it will return to processing S21 and processing will be continued. Moreover, in processing S22, if the call in of whether the call in was carried out to not connecting with a circuit has not been judged and (S23) carried out (it is No), it will return to processing S21 and processing will be continued (it is No).

[0049] moreover, a ***** [that a partner's telephone number which is shown in drawing 5 and by which call origination was carried out is stored in the number registration memory 15 in processing S23 if the call in is carried out (it is Yes)] -- lighting with green LED17 and red LED18 -- if processing which puts out the light youthfully is performed (S24) and processing termination is carried out, it will return to processing S21 and processing will be continued.

[0050] Next, actuation of the 3rd equipment is explained. First, since the signal inputted from a dc-battery 13 is lower than the threshold set up beforehand when the amounts of accumulation of electricity of a dc-battery are insufficient, a control section 11 makes red LED 18 turn on. And the liquid crystal display section 19 comes to be illuminated by red LED 18, and a user comes to get to know that the amounts of accumulation of electricity of a dc-battery run short.

[0051] The telephone number of the partner by whom a control section 11 is contained in the signal concerned and who did call origination is searched from the number registration memory 15, when searched, even if the amounts of accumulation of electricity of a dc-battery are insufficient, red LED 18 is switched off, and green LED19 is made to output the signal which shows that the call in was carried out when the recovery section 12 carried out the call in here, and to turn on.

[0052] And the liquid crystal display section 19 comes to be illuminated by green LED18, and a user comes to get to know that call origination was done by the partner registered into the number registration memory 15. When a user does off-hook and a circuit is connected soon, a control section 11 switches off green LED17, and makes red LED 18 turn on by the comparison with the signal again inputted from a dc-battery 13, and the threshold set up beforehand. And the liquid crystal display section 19 comes to be illuminated by red LED 18.

[0053] After according to the 3rd equipment carrying out off-hook until it carries out a call in After distinguishing the condition of the amount of accumulation of electricity of a dc-battery by the foreground color of the liquid crystal display section 19, and being able to grasp the condition of actuation of equipment easily and carrying out a call in until it carries out off-hook Whether the partner who did call origination is registered into the number registration memory 15 distinguishes by the foreground color of the liquid crystal display section 19, it acts as a user, aim attachment ***** can do what kind of person a calling party is, and there is effectiveness which can raise convenience.

[0054]

[Effect of the Invention] Since it is considering as the personal digital assistant equipment to which is equipped with the light emitting device of two or more colors as a back light of the liquid crystal display section, the color of a light emitting device is changed according to the condition of having been set up beforehand, and the foreground color of the liquid crystal display section is changed according to invention according to claim 1, there is effectiveness which can distinguish the condition of personal digital assistant equipment by the color of the liquid crystal display section, and can distinguish operating state easily.

[0055] According to invention according to claim 2, a dc-battery, a control section, and the liquid crystal display section, It has the back light color setting memory which stores a setup with the 1st and 2nd light emitting device, and the 1st pattern which makes the 1st light emitting device turn on and the 2nd pattern which makes the 2nd light emitting device turn on as a back light of this liquid crystal display section. If the amount of accumulation of electricity of a control section of a dc-battery is lower than the amount of accumulation of electricity set up beforehand Since it is considering as the personal digital assistant equipment which the 2nd light emitting device is turned on by the 2nd pattern, and makes the 1st light emitting device turn on by the 1st pattern if not lower than the amount of accumulation of electricity set up beforehand There is effectiveness which can distinguish whether the amount of accumulation of electricity of a dc-battery is enough by the foreground color of the liquid crystal display section, and can distinguish operating state easily.

[0056] The recovery section which restores to the signal which arrives at an antenna according to invention according to claim 3, The number registration memory which registers and stores two or more telephone numbers, and a control section, It has the back light color setting memory which stores a setup of the 1st pattern which turns on the liquid crystal display section, the 1st and 2nd light emitting device, and the 1st light emitting device, and the 2nd pattern which turns on the 2nd light emitting device. If this partner's telephone number is searched from number registration memory in response to the input of the signal with which a control section contains the telephone number of the partner who did call origination of the self from the recovery section If the 1st light emitting device is turned on and it does not refer to the 1st pattern, since it is considering as the personal digital assistant equipment which turns on the 2nd light emitting device by the 2nd pattern, it is effective.

[0057] When having not carried out a call in, according to invention according to claim 4, youthfully during a message After performing and carrying out the call in of the actuation according to claim 2 until it starts a message Since it is considering as the personal digital assistant equipment which performs actuation according to claim 3, it distinguishes whether the amount of accumulation of electricity of a dc-battery is enough by the foreground color of the liquid crystal display section. When operating state can be distinguished easily and carries out a call in, the aim of what kind of person the partner who did call origination is can be given, and there is effectiveness which can raise convenience.

[0058] Since it is considering as the personal digital assistant equipment according to claim 2, 3, or 4 which can rewrite the 1st and 2nd pattern set as back light color setting memory according to invention according to claim 5, freely, a user rewrites the pattern of luminescence of a light emitting device so that highly [visibility], operating state is distinguished more easily, and there is effectiveness which can raise convenience.

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CLAIMS

[Claim(s)]

[Claim 1] Personal digital assistant equipment characterized by being personal digital assistant equipment possessing the liquid crystal display section, having the light emitting device of two or more colors as a back light of said liquid crystal display section, changing the color of said light emitting device according to the condition of having been set up beforehand, and changing the foreground color of said liquid crystal display section.

[Claim 2] A dc-battery, a control section, the liquid crystal display section, the 1st light emitting device, and the 2nd light emitting device, It is personal digital assistant equipment with which it has back light color setting memory, and said the 1st light emitting device and said 2nd light emitting device operate as a back light of said liquid crystal display section. Said back light color setting memory is back light color setting memory which stores a setup with the 1st pattern which makes said 1st light emitting device turn on, and the 2nd pattern which makes said 2nd light emitting device turn on. If said control section detects the amount of accumulation of electricity of said dc-battery and its amount of accumulation of electricity concerned is lower than the amount of accumulation of electricity set up beforehand If said 2nd light emitting device is turned on according to the 2nd pattern set as said back light color setting memory and the amount of accumulation of electricity is not lower than the amount of accumulation of electricity set up beforehand Personal digital assistant equipment characterized by being the control section which turns on said 1st light emitting device according to the 1st pattern set as said back light color setting memory.

[Claim 3] The recovery section which restores to the signal which arrives at an antenna, and the number registration memory which registers and stores two or more telephone numbers, It has a control section, the liquid crystal display section, the 1st light emitting device and the 2nd light emitting device, and back light color setting memory. Said the 1st light emitting device and said 2nd light emitting device are personal digital assistant equipment which operates as a back light of said liquid crystal display section. Said back light color setting memory It is the back light color setting memory which stores a setup with the 1st pattern which makes said 1st light emitting device turn on, and the 2nd pattern which makes said 2nd light emitting device turn on. Said control section In response to the input of the signal showing having carried out the call in from said recovery section, a partner's telephone number which carried out call origination from the signal concerned is detected. According to the 1st pattern which searched this telephone number from said number registration memory, and was set as said back light color setting memory when searched, turn on said 1st light emitting device, and if not searched Personal digital assistant equipment characterized by being the control section which turns on said 2nd light emitting device according to the 2nd pattern set as said back light color setting memory.

[Claim 4] The recovery section which restores to the signal which arrives at an antenna, and the number registration memory which registers and stores two or more telephone numbers, It has a dc-battery, a control section, the liquid crystal display section, and the 1st light emitting device and 2nd light emitting device. Said the 1st light emitting device and said 2nd light emitting device are personal digital assistant equipment which operates as a back light of said liquid crystal display section. Said back light color setting memory It is the back light color setting memory which stores a setup with the 1st pattern which makes said 1st light emitting device turn on, and the 2nd pattern which makes said 2nd light emitting device turn on. Said control section Usually, if the amount of accumulation of electricity of said dc-battery is detected and the amount of accumulation of electricity concerned is lower than the amount of accumulation of electricity set up beforehand If said 2nd light emitting device is turned on according to the 2nd pattern set as said back light color setting memory and the amount of accumulation of electricity is not lower than the amount of accumulation of electricity set up beforehand If the input of the signal showing having turned on said 1st light emitting device according to the 1st pattern set as said back light color setting memory, and having carried out the call in from said recovery section is received Detect a partner's telephone number which carried out call origination from the signal concerned, search this telephone number from said number registration memory, and if searched According to the 1st pattern set as said back light color setting memory, turn on said 1st light emitting device, and if not searched Personal digital assistant equipment characterized by being the control section which turns on said 2nd light emitting device according to the 2nd pattern set as said back light color setting memory.

[Claim 5] A control section is personal digital assistant equipment according to claim 2, 3, or 4 characterized by being the control section rewritten according to the directions into which the 1st pattern set as said back light color setting memory and the 2nd pattern were inputted.

[Translation done.]

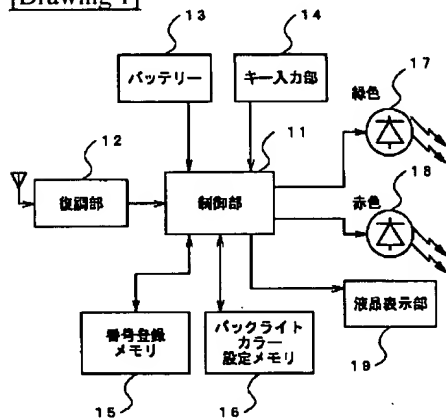
* NOTICES *

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1. This document has been translated by computer. So the translation may not reflect the original precisely.
2. **** shows the word which can not be translated.
3. In the drawings, any words are not translated.

DRAWINGS

[Drawing 1]

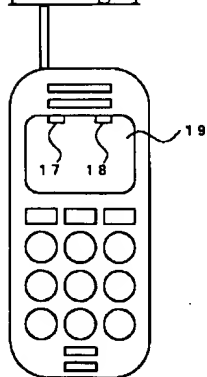


[Drawing 2]

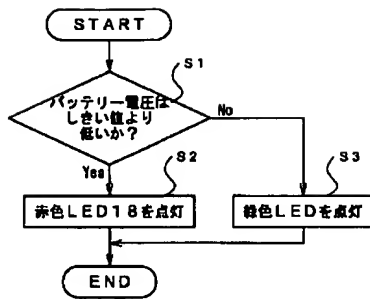
(a)	状 態	バックライトカラー
	バッテリー蓄電量十分	緑
	バッテリー蓄電量不足	赤

(b)	状 態	バックライトカラー
	番号登録	緑
	番号不登録	赤

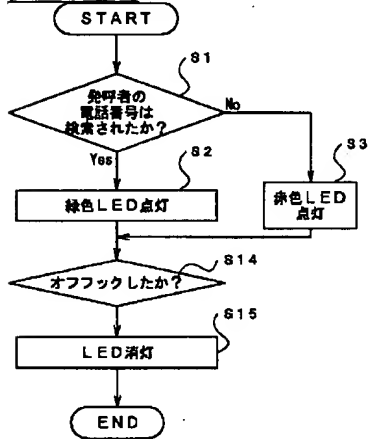
[Drawing 3]



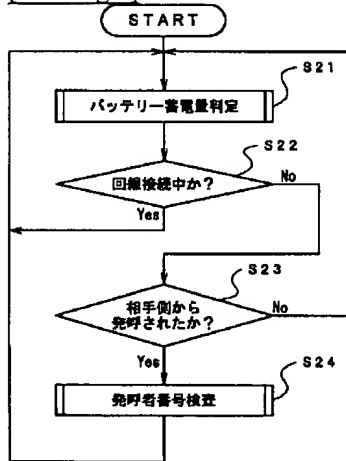
[Drawing 4]



[Drawing 5]



[Drawing 6]



[Translation done.]